

FUGRO WEST, INC.



November 14, 2008
Project No. 3267.003.06

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Tehachapi-Cummings County Water District
PO Box 326
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Attention: *Mr. John Martin*
General Manager

**Major Project Events Chronology
Tehachapi Groundwater Basin Study**

Dear Mr. Martin:

On November 12, 2008, a meeting between representatives of the Tehachapi-Cummings County Water District (District), Golden Hills Community Services District (GHCSO), the City of Tehachapi (City), and Fugro West, Inc. (Fugro) was held at the District office in Tehachapi. The purpose of the meeting was to discuss the original budget for the Tehachapi Groundwater Basin Study, the additional costs incurred during 2008 due to out-of-scope work, and the funds required to complete the study to the satisfaction of the stakeholder participants. At the conclusion of the meeting, I was asked to provide a chronology of major project events (i.e., dates of task completions, meetings, data collection activities, report issuances, etc.) that have occurred from the inception of the study to the present. This letter provides this chronology as well as a narrative explanation of these events in order to provide a context for the current status of the study.

Fugro was authorized to begin the project in April 2006. The project consisted of six major tasks. Task 1 concerned the collection of required data and the development of a conceptual model of the basin hydrogeology. The findings of Task 1 were documented in the Task 1 Interim Report, submitted to the District in February 2007, and subsequently distributed by the District to the stakeholder participants for review and comments. Very few extensive comments of the Task 1 Interim Report were made by the stakeholders or the consultants reviewing the report of their behalf. Provost & Pritchard (P & P) did provide comments to GHCSO in May 2007, however the memorandum containing those comments was not forwarded to Fugro until December 2007.

Task 2 consisted of the development of a numerical groundwater model for the basin. By June 2007, Fugro had completed Task 2 and was ready to use the model to evaluate different scenarios of future water supply and demand in the basin (Task 4). (Task 3 consisted of the development of a water quality model and was completed during the implementation of



the nitrate transport scenario in Task 4.) Based on discussions with District staff, five scenarios were proposed and were outlined in a letter submitted to the District on June 13, 2007. The definitions of these scenarios were further refined over the next several months through continued discussions with District staff. The final agreed upon scenarios were implemented in the groundwater model and the results for Task 4 were completed during the first part of November 2007.

On November 14, 2007, Nels Ruud (Fugro project hydrogeologist) and I presented the results of the modeled scenarios (Task 4) to the District Board, the Water Availability Committee, and the general public at the District office. On the following day (November 15), we gave the same presentation to the GHCSO Board, City representatives, and the general public at the GHCSO office. At that point, Fugro had completed the modeling portion of the project (i.e., Tasks 1 through 4). The District had expressed satisfaction with the modeling results and seemed to regard that portion of the study complete. The only remaining task to be completed was the preparation of a final report documenting the results of the groundwater basin study (Task 5). At the completion of these public presentations, several thousand dollars remained in the authorized budget to finish the final report.

Following the public presentations, GHCSO requested that the District set up a meeting to discuss the scenarios and some of the input data used in the simulations. That meeting was held at the P & P office in Bakersfield on December 17, 2007. In that meeting, representatives from GHCSO and the City indicated that they wanted to run a different set of scenarios, using different input data values than had been used in the model. I expressed concern that Fugro did not have the budget to conduct those additional model runs. Representatives from both GHCSO and the City clearly acknowledged in that meeting that their requests were out-of-scope, but they believed that the additional work was sufficiently important that additional funds should be spent to run the scenarios that they believed were important to their communities. These modified scenarios and the additional data necessary to implement them were documented in a letter by Fugro and submitted to the District on January 2, 2008. This letter included a table of "Action Items" that listed the additional data items needed for the revised scenarios and the agencies responsible for collecting and providing them to us.

Over the next several months, follow-up requests were made by us to stakeholders and their representative consultants to obtain the data necessary to implement the modified scenarios. Some of these data items were provided to Fugro in a timely manner and others were not.

On January 22, March 11, and May 2, 2008, I made phone calls to Glenn Mueller and/or John Otto to express my concerns about the direction of the project, the rising costs of the work, and that all of this work was out-of-scope. As a result of my May 2 phone call, a teleconference call was held on May 13, 2008 between TCCWD and Nels Ruud and myself to discuss these issues. At that time, Mr. Mueller assigned Steve Minton to be our primary contact at TCCWD for this project. Steve suggested that in order to try to reach consensus on the structure of the scenarios by the stakeholders, an outline (Scenarios Outline) describing the



proposed scenarios should be prepared by Fugro. The outline would include a description of the additional data collected since January and the implementation of this data in the revised scenarios.

By mid-June, most but not all of the additional data had been provided to us. As a result, we had not yet been able to complete a draft of the Scenarios Outline. On June 25, 2008, I met with Glenn Mueller, Steve Minton, and John Otto (without charge to the District or to the Project) to again express my continued concern about the lack of progress on the part of the stakeholders in providing the data that they wanted included in the model, my concern about the purpose of the Scenarios Outline, and the continued rising out-of-scope costs associated with these efforts. Mr. Mueller initially asked for an accounting of the out-of-scope costs at that time, but we then all agreed that it would be more meaningful to do so once we had agreement on the scenarios, which we believed would occur in the following couple weeks. What we did not foresee at that time was that an agreement on the scenarios was still several months away.

A draft of the Scenarios Outline memorandum was finally completed and submitted to the District on July 3, 2008. Stakeholder comments were then relayed to us by the District and a second version of the Scenarios Outline was submitted on July 16, 2008. A meeting was convened on August 4, 2008 in which the stakeholders provided comments to the July 16th draft and discussed the necessary modifications to the draft to make it final. Overall, most of the modifications consisted of minor edits and the meeting participants indicated that once implemented the draft should be readily finalized and Fugro could then proceed in implementing the revised scenarios. A third version of the Scenarios Outline that included these edits was then submitted on September 3, 2008.

On September 12, 2008, Dale Melville (P & P) provided comments on behalf of GHCSO to the third version of the Scenarios Outline. Instead of noting whether the agreed upon edits had been implemented, he raised a number of different issues that were not brought up during the August 4 meeting by the stakeholders. These other comments created additional controversy and concern on the side of the stakeholders and it was determined that a face-to-face meeting between Fugro and all of the study participants was necessary to come to a final decision about what changes were needed in the Scenarios Outline to finalize it so that we could proceed with finishing the study. This meeting occurred on October 1, 2008 at the P & P office in Bakersfield.

At the October 1 meeting, I suggested that Fugro be allowed to simply prepare a final report that summarized the model development, without running any scenarios (I had also suggested this option at the December 17, 2007 meeting). That would allow the different stakeholders to then formulate their own set of scenarios and run them separately, outside of the structure of the District-led project. This suggestion was not accepted. I then expressed concern that all these efforts by Fugro were unanticipated and out-of-scope, and that costs were rising. Again, representatives from both the City and GHCSO acknowledged that even though the work was out-of-scope, it was important and needed to be done.



By the close of the meeting on October 1, a new set of scenarios was agreed upon by the entire group as well as other additional input data necessary to implement them. A final Scenarios Outline memorandum was submitted on October 29, approval of which will allow Fugro to run the simulations and prepare the final report.

A chronology of major project events is listed as follows:

April 2006	Project Authorization, contract amount -- \$208,000
February 2007	Submittal of Task 1 Report
June 13, 2007	Submittal of Technical Memo outlining the scenarios to be run.
June 21, 2007	Request for authorization of additional funds and budget increase from \$208,000 to \$237,000.
June 21, 2007	Fugro write-off of \$21,000 of accrued fees associated with preparation of Task 1 efforts.
July 2007	Approval from TCCWD to run scenarios as outlined in June 13 letter.
November 14-15, 2007	Presentation of modeling results in meetings to TCCWD, City of Tehachapi, Golden Hills CSD, and other interested parties. At this point, Fugro had completed the project except for final report preparation. Both the District and Fugro considered the project to be complete (except for final report preparation).
December 17, 2007	Meeting held in Bakersfield at request of GHCSO and the City to discuss possible additional scenarios to run and to determine additional data needs to refine future scenarios
January 2, 2008	Fugro issues minutes from December 17, 2007 meeting outlining data collection Action Items
January 22, 2008	Fugro followed up with P & P to acquire new GHCSO nitrate loading data
January 22, 2008	Fugro followed up with Boyle Engineering to acquire new City nitrate loading data
February 22, 2008	Received spreadsheet with nitrate level measurements in GHCSO wells from P & P
March 3, 2008	Received spreadsheet of GHCSO water usage and wastewater discharge and a CAD map of the CSD meter route from P & P
April 9, 2008	Received from TCCWD future surface water needs projections of different Basin agencies



May 13, 2008	Teleconference with TCCWD to discuss data collection and scenarios definition progress. Call was initiated by Fugro to express concern over lack of progress by stakeholders in providing required data, and lack of progress of consensus by stakeholders on the scenarios to be run. We expressed concern in this phone meeting about the increasing costs of the unanticipated, out-of-scope work that was occurring. Glenn Mueller asked Steve Minton to be our primary contact for the project.
May 13, 2008	Steve Minton asked Fugro to prepare an outline of the proposed scenarios so the stakeholders could review, provide comment, and approve
May 15, 2008	TCCWD provided historical surface water delivery data for generation of scenarios
May 27, 2008	Fugro requested wastewater treatment and nitrate loading data for the City from Boyle
June 2, 2008	Fugro sent email to TCCWD about progress on data collection and Scenarios Outline memorandum preparation. Expressed concern that we had still not received data from City on wastewater treatment plant data
June 9, 2008	Received City WWTP Annual Reports (2003 through 2006) from Boyle
July 3, 2008	Issued first version of Scenarios Outline memorandum
July 10, 2008	TCCWD provided comments for revising the Scenarios Outline memorandum, including (on behalf of the City) a request to use a 1.5% annual growth for the City in the future scenarios, instead of the 4.5% growth rate that had been previously assigned by the City
July 16, 2008	Issued second version of Scenarios Outline memorandum, reflecting results of TCCWD comments provided to Fugro on July 10.
August 4, 2008	Teleconference meeting with study participants to discuss second version of Scenarios Outline memorandum. During meeting, the City (through Boyle) requested the use of a 2.5% annual growth for the City of Tehachapi in the future scenarios. Following that meeting, Glenn Mueller, John Otto, Steve Minton, and Nels Ruud (Fugro) discussed the results of the meeting and agreed that the only necessary changes to the Scenarios Outline were editorial. They believed that consensus was essentially reached on the scenarios. It was at this meeting that it was first indicated that the Scenarios Outline was a public document, and not an internal working document for discussion purposes only among the stakeholders.
August 6, 2008	Fugro received wastewater treatment plant reports for the City from Boyle



August 7, 2008		Fugro received response from Boyle on distribution of wastewater between percolation pond and Borrow pit
August 15, 2008		Fugro received sorted nitrate level data for GHCSO from P & P
August 18, 2008		TCCWD provided updated historical surface water delivery data for use in developing scenarios
August 25, 2008		Received City population estimates for 2000, 2007, and 2008 from Boyle. A new request was issued to use a 2% annual growth rate for the City in the future scenarios
September 3, 2008		Issued third version of Scenarios Outline memorandum, based on comments received in the August 4 meeting, and based on data received on August 6, 7, 15, 18, and 25.
September 2008	10,	Received water level measurements in GHCSO wells from P & P
September 2008	12,	Received comments from P & P concerning the September 3 third version of Scenarios Outline memorandum
September 2008	29,	Received water quality and safe yield study reports for GHCSO from P & P
October 1, 2008		Meeting with study participants in Bakersfield. The future scenarios to be simulated by the model were significantly changed by the stakeholder group at this meeting, which are reflected in the issuance of the fourth version of the Scenarios Outline on October 29.
October 29, 2008		Issued fourth version of Scenarios Outline memorandum.

Assuming the October 29, 2008 Scenarios Outline is approved, the work effort to run the scenario simulations and finalize the summary report are estimated to be approximately \$74,000, as shown on the attached spreadsheet (Table 1). The fee estimate includes the time and expenses to re-populate the model input data sets with the recently obtained data from the City and GHCSO, run the simulations, and prepare a draft and final report. The fee estimate assumes that Fugro will submit a Draft report to the District and the stakeholders, which we expect to be reviewed by the stakeholders and comments submitted back to us within two weeks. Two weeks after receipt of comments, we will submit a Final report, consisting of six hard bound copies and three electronic versions on CDs. Following submittal of the Final report, we have also assumed two formal presentations in Tehachapi.

With respect to schedule, we will submit to you a Draft report within 10 weeks following an approval of the Scenarios Outline and direction to proceed.



I trust that this adequately summarizes the chronology of events, and captures the discussions of our meeting on November 12. If you have any questions, please do not hesitate to call me.

Sincerely,

FUGRO WEST, INC.

A handwritten signature in black ink, reading "Paul A. Sorensen". The signature is fluid and cursive, with the first name "Paul" being the most prominent.

Paul A. Sorensen
Principal Hydrogeologist
Project Manager

Client: Tehachapi-Cummings County Water District
Project No. 3267.003
Revision Date: 10/16/2008

Gardner	Sorensen	Leffler	Ruud	Nicely	Fugro	Fugro
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Description	Classification	Rate								Task Labor-Hrs.	Task Labor Cost
		Principal Geologist \$200	Principal Geologist \$200	Associate Geologist \$175	Project Geologist \$135	Project Geologist \$135	GIS Supervisor \$175	GIS Graphics \$115	Word Processor \$70		
Calibrate Groundwater Model				2	60					62	\$8,450
Scenario 1 - Baseline Conditions			1	2	20					23	\$3,250
Scenario 2 - Growth with SWP Stoppage			1		20					21	\$2,900
Scenario 3 - Growth with SWP Increases			1		20					21	\$2,900
Scenario 4 - Nitrate Transport Model			1	2	60					63	\$8,650
Calibration and Prediction Sensitivity Analysis				4	40					44	\$6,100
Final Report Preparation			20	4	100	10	80	8		222	\$29,710
Project Management, Meetings, Presentations		4	40		24					68	\$12,040
Task Subtotal-Hrs.		4	64	14	344	0	10	80	8	524	
Task Subtotal-Costs		\$800	\$12,800	\$2,450	\$46,440	\$0	\$1,750	\$9,200	\$560		\$74,000

TOTAL COST **\$74,000**